



13 Environmental Infrastructure and Management

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Vision: To protect and enhance the natural and built environment, while facilitating the sustainable development of the County, through the continued improvement of infrastructure services and appropriate environmental protection and management. To facilitate the provision of a widespread accessible telecommunications infrastructure in order to achieve balanced social and economic development.

13.1 Water Supply and Drainage

13.1.1 Policy EI1: Water Supply and Drainage

It is Council policy to provide adequate high quality drinking water, to promote water conservation and to continue the development and improvement of the water supply and drainage systems throughout Dún Laoghaire-Rathdown in order to meet the anticipated water and drainage requirements of the County - all in accordance with the recommendations set out in the 'Greater Dublin Water Supply Strategic Study' and 'The Greater Dublin Strategic Drainage Study'.

The Council shall ensure conformance with the relevant recommendations set out in *'The Provision and Quality of Drinking Water in Ireland – A Report for the Years 2007-2008'* (EPA, Office of Environment Enforcement, 2009). Existing and new populations under the County Development Plan shall be served with clean and wholesome drinking water. The Council aims to ensure that compliance is achieved, as a minimum, with regard to the 48 parameters set out under the European Communities (Drinking Water) Regulations (No.2) 2007. The Council has systems in place to obtain compliance with these standards. In addition protocols are in place to manage any incident of non-compliance and ensure a return to compliance as soon as possible.

It is Council policy to comply with the Waste Water Discharge Licence for the Shanganagh

agglomeration issued under Regulation 28(1) of the Waste Water Discharge (Authorisation) Regulations 2007.

Development under the Plan shall be preceded by sufficient capacity in the public waste water treatment plants and appropriate extensions in the existing public waste water treatment catchments. The Council shall implement the relevant recommendations set out in *'Urban Waste Water Discharges in Ireland for Population Equivalents Greater than 500 Persons – A Report for the Years 2004-2005'* (EPA, Office of Environment Enforcement, 2007).

The ongoing and proposed programmes of water supply and drainage infrastructure works will ensure the availability of serviced residential and commercial lands, to cater for an adequate supply of housing and facilitate continued employment growth and opportunities. This will allow the County to cater in a coherent way for its residents and business community and to fulfil its role at regional level by fostering the continuing consolidation of development within the metropolitan area.

The programme will be multi-faceted and encompass such matters as water conservation and leakage control, upgrading of older sections of the various distribution networks, elimination of untreated municipal sewage to coastal waters and the decommissioning of septic tanks for dwellings in areas that are now served by mains drainage. (See also Section 16.2).

13.1.2 Policy EI2: Integrated Water Management Plans

It is Council policy to contribute to the promotion of the development of Integrated Water Management Plans for the Dublin Region and to participate in any pilot scheme for the establishment of such Plans.

The primary purpose of Integrated Water Management Plans is to examine issues of quantity and quality of river waters at Catchment and River Basin level so that the entire life cycle of the waters can be managed in a sustainable fashion.

The Council shall address the significant water management issues identified in the Water Matters Consultation publications for the Eastern River Basin District. When adopted, the relevant policies and objectives of the Eastern River Basin Management Plan shall be integrated into the Plan through amendment or otherwise. The Council will promote the implementation of the specific objectives at water body level of any agreed Programme of Measures prepared as part of the River Basin Management Plan.

13.1.3 Policy EI3: Water Quality Management Plans

It is Council policy to implement Water Quality Management Plans for ground, surface, coastal and estuarine waters as part of the implementation of the EU Water Framework Directive.

13.1.4 Policy EI4: Sustainable Urban Drainage Systems

It is Council policy to ensure that all development proposals incorporate Sustainable Urban Drainage Systems (SUDS).

Development will only be permitted where the Council is satisfied that suitable measures have been considered that balance the impact of urban drainage through the achievement of control of run-off quantity and quality, and enhances amenity and habitat (e.g. see Chapters 5 and 16 as regards residential developments and vehicular entrances). In particular the requirements of the 'SUDS Manual by the UK's Construction Industry Research and Information Association (CIRIA)' shall be followed unless specifically exempted by Council.

13.1.5 Policy EI5: Stormwater Impact Assessments

It is Council policy to ensure that all new significant developments prepare a Stormwater Impact Assessment which incorporate Stormwater Audits in accordance with the Council's Stormwater Management Plan Guidance Document.

13.1.6 Policy EI6: Storm Overflows of Sewage to Watercourses

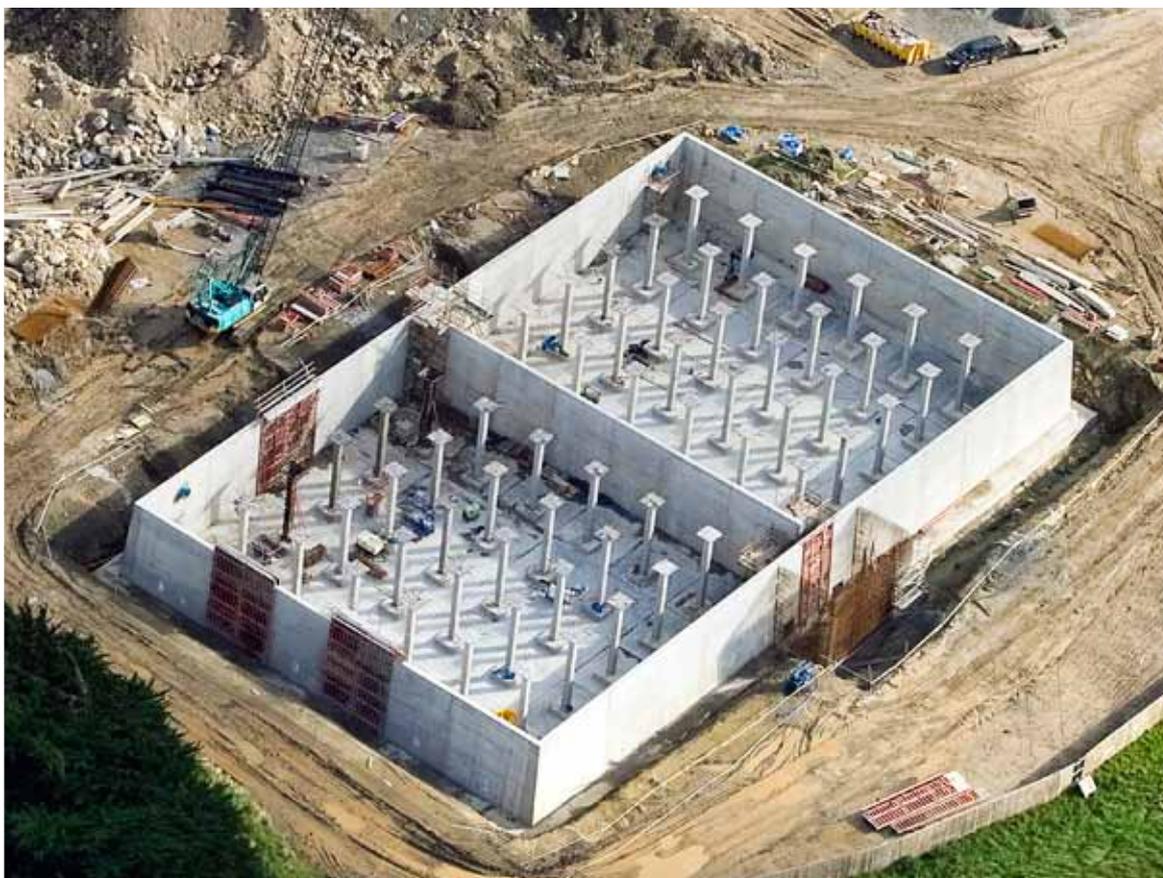
It is Council policy to minimise the number and frequency of storm overflows of sewage to watercourses and to establish, in co-operation with the adjoining local authorities, a consistent approach to the design, improvement and management of these intermittent discharges to ensure that the needs of the Region's receiving waters are met in a cost effective manner.

13.1.7 Policy EI7: Water Services Investment Programme

It is Council policy to work to deliver on key water services projects outlined in the Water Services Investment Programme - Assessment of Future Needs 2007 - 2009:

Key projects include:

- > Shanganagh Waste Water Treatment Plant
- > Carysfort/Maretimo Scheme
- > Shanganagh Network Scheme
- > Old Connaught/Woodbrook Water & Drainage Scheme
- > Sandyford High Level Water Supply Scheme
- > Dún Laoghaire Sewerage Scheme





13.2 Waste Management

13.2.1 Policy E18: Waste Management Strategy

It is Council policy to conform to the European Union and National waste management hierarchy as follows:

- > waste prevention
- > waste recycling
- > energy recovery and
- > disposal

subject to economic and technical feasibility and Environmental Assessment.

The Council's Waste Management Strategy is firmly grounded in EU and National policy and can be summarised by the waste hierarchy of prevention, recycling, energy recovery and disposal. This strategy fully embraces the 'polluter pays' principle. (See also Section 16.12).

13.2.2 Policy E19: Waste Plans

It is Council policy to publish plans for the collection, treatment, handling and disposal of wastes in accordance with the provisions of the Waste Management Acts 1996-2001.

13.2.3 Policy E10: Private Waste Companies

It is Council policy to ensure that all waste that is disposed of by private waste companies is done so in compliance with the requirements of the Environmental Protection Agency and the Waste Management Legislation and in accordance with the Planning Code.

Implementation of this Policy will require control and supervision of private waste collection companies by the Council through the mechanism of waste permits. (See also Section 16.13).

13.2.4 Policy E11: Waste Prevention and Reduction

It is Council policy to promote the prevention and reduction of waste and to co-operate with industry and other agencies in viable schemes to achieve this.

In line with the principles of sustainable development it is the intention of the Council to promote waste prevention in order to stabilise waste arisings and decouple the environmental impacts of waste generation from economic growth. The Council is committed to implementing the objectives of the National Waste Prevention Programme at a local level with businesses, schools, householders, community groups and within the Council's own activities.

13.2.5 Policy Eh12: Waste Re-use and Re-cycling

It is Council policy to promote the increased re-use and re-cycling of materials from all waste streams. It will co-operate with other agencies in viable schemes for the extraction of useful materials from refuse for re-use or re-cycling and will adopt the National targets as stated in the 'Dublin Regional Waste Management Plan 2005-2010'.

By agreement with other local authorities and agencies, and subject to the availability of finance, it is the intention of the Council to promote the following:

- Source separate waste into organic and non-organic streams or other waste management systems that divert waste from landfill. The objectives will be to maximise the potential for each waste fraction to be reused and recycled or composted and divert organic waste from landfill, in accordance with the 'National Strategy on Biodegradable Waste 2006'.
- Carry out a public information and education campaign on waste recycling techniques and actions.
- Develop a countywide network of multi-material 'Recycling Centres' and 'Bring Centres' in suitable locations and in accordance with the strategies set out in the 'Waste Management Plan for the Dublin Region 2005-2010', to achieve national targets and to continue to expand the countywide collection system for domestic recyclable waste. The purpose of the 'Recycling Centres' and 'Bring Centres' is to accommodate the collection of post-consumer recyclables from the local neighbourhood and provide onward transfer to a materials recovery or recycling facility.
- Co-operate with other interests in seeking to maximise the recovery and recycling of packaging and priority wastes, as well as the reduction in landfilling of organic wastes.

13.2.6 Policy Eh13: Refuse Disposal

It is Council policy to dispose of refuse by means of sanitary landfill or other suitable methods as deemed appropriate.

The Council intends that the safe disposal of refuse, which cannot be reused or re-cycled, shall be carried out by means of sanitary landfill or other suitable methods as deemed appropriate. This approach reflects current European Union and County Council policy, as set out in the 'Waste Management Plan for the Dublin Region 2005-2010'. However, in the short term, it is recognised that sanitary landfill will remain as the primary method of disposal. It is the intention of the Council, in co-operation with the other Dublin Metropolitan local authorities, to acquire adequate sites for landfill and to develop and operate these with

minimum detriment to the environment. Privately owned landfills may also be utilised by the Dublin Metropolitan Councils.

In collaboration with other neighbouring authorities in the Dublin Region, it is intended to utilise the facilities of the waste to energy plant being expedited by Dublin City Council before final disposal to landfill.

13.2.7 Policy Eh14: Hazardous Waste

It is Council policy to co-operate with other agencies, to plan, organise, authorise and supervise the disposal of hazardous waste.

The Council will have regard to the recommendations made by the Environmental Protection Agency as appropriate in relation to the effective management by the Council of hazardous waste, including the recommendations of the 'National Hazardous Waste Management Plan 2008-2012'.

13.2.8 Policy Eh15: Re-Use of Landfill Sites

It is Council policy that landfill sites, when full, be landscaped and used for amenity purposes, or where such use is inappropriate, be returned to agriculture or other beneficial use. Any such landfill sites will be monitored in accordance with the Waste Management Act 1996 and Environmental Protection Agency requirements.

The landfill site at Ballyogan, which is now closed, will be the subject of a comprehensive restoration plan prepared and implemented by the Council in accordance with the EPA licence requirements. When completed it will provide a large public recreational amenity space for the growing communities at Stepaside and Kiltiernan/Glenamuck.

13.3 Pollution

13.3.1 Policy Eh16: Air and Noise Pollution

It is Council policy to implement the provisions of National and EU Directives on air and noise pollution and legislative requirements in conjunction with other agencies as appropriate.

Dún Laoghaire-Rathdown recently adopted 'The Air Quality Management Plan for the Dublin Region, 2008-2012' under the provisions of the Air Pollution Act 1987.

The Council has established a network of monitoring stations to monitor the extent of air pollution caused by smoke and sulphur dioxide (SO₂), Nitrogen dioxide (NO₂), Particulate Matter, Carbon dioxide (CO₂), Lead and Benzene in accordance with EU policy directives. This network will be extended as required.

Noise can have a significant impact on the environment and the quality of life enjoyed by individuals and communities. In accordance with the requirements of EU *Directive 2002/49/EC*, the Council, in collaboration with the three other Dublin Local Authorities, recently produced an Action Plan relating to the 'Assessment of Environmental Noise for the Dublin Agglomeration 2008-2013'.

The Directive aims at providing a basis for developing EU-wide measures to reduce noise emitted from major sources, in particular road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment. The Directive applies to environmental noise to which humans are exposed but excludes noise that is caused by the exposed person himself/herself, noise from domestic activities, noise created by neighbours, noise at work places or noise inside means of transport.

The Action Plan is designed to manage, within the Dublin Agglomeration, noise issues and effects, including noise reduction if necessary. The Plan also aims to protect quiet areas against any increase in noise.

13.3.2 Policy E17: Light Pollution

It is Council policy to ensure that the design of external lighting schemes minimise the incidence of light spillage or pollution in the immediate surrounding environment and have due regard to the residential amenity of surrounding areas.

While adequate lighting is essential to a safe and secure environment, light spillage from excessive or poorly designed lighting is increasingly recognised as a potential nuisance to surrounding properties, a threat to wildlife, and can reduce the visibility of the night sky.

Lighting columns and other fixtures can have a significant effect on the appearance of buildings and the environment and where proposals for new lighting require planning permission, the Council will ensure that they are carefully and sensitively designed. Lighting fixtures should provide only the amount of light necessary for the task in hand and shield light given out in order to avoid creating glare or emitting light above a horizontal plane. (See also Sections 16.10.5 and 16.11.4).

13.3.3 Policy E18: Water Pollution

It is Council policy to implement the provisions of water pollution abatement measures in accordance with National and EU Directives and legislative requirements in conjunction with other agencies as appropriate.

In implementing this Policy Dún Laoghaire-Rathdown County Council will endeavour to:

- Maintain the quality of seawater adjoining the County to the necessary standards, with particular reference to areas of the coastline

where bathing takes place. Special emphasis will be devoted to beaches designated under the Quality of Bathing Water Regulations 2008.

- Improve the water quality in rivers and other watercourses in the County, including ground waters.
- Minimise the impact on ground water of discharges from septic tanks and other potentially polluting sources. The Council will comply with the Environmental Protection Agency's Code of Practice: *Wastewater Treatment and Disposal Systems Serving Single Houses*, 2009.

13.3.4 Policy E19: Litter Control

It is Council policy to ensure that public places and other areas visible to any extent from public places within the County are maintained free of litter. It is the policy of the Council to publish plans for the prevention and control of litter and for measures to encourage public awareness with the view to eliminating litter pollution in accordance with the provisions of the *Litter Pollution Act 1997*.

The Council recognises that litter is a major environmental problem that significantly detracts from the visual quality of urban and rural areas and from the coastline. The Council has adopted a statutory '*Litter Management Plan 2005-2008*' setting out appropriate objectives and targets for eliminating the litter problem within the County. This Plan will be updated shortly.

13.3.5 Policy E20: Major Accidents

It is Council policy to have regard to the provisions of the 'Major Accidents Directive' (*European Council Directive 96/82/EC*). This Directive relates to the control of major accident hazards involving dangerous substances and its objectives are to prevent major accidents and limit the consequences of such accidents.

This policy will be implemented through the development management process through controls on the siting of new establishments, on modifications to existing establishments and on development in the vicinity of an establishment which, by virtue of its type or siting, is likely to increase the risk or consequences of a major accident. At present, however, there are no 'Seveso' sites within Dún Laoghaire-Rathdown.

13.4 Specific Objectives

13.4.1 Water Supply Objectives

It is an objective of the Council to undertake the following projects as and when necessary and subject to the availability of appropriate approval and finance:

A. Old Connaught-Woodbrook Water Supply Scheme

This is a major water scheme comprising service reservoirs and trunk mains to facilitate development and to improve security of existing water supplies from Cherrywood south to the County border and including Woodbrook, Old Conna, Ballyman and adjoining areas. The scheme is programmed for completion within the period of the Plan.

B. Rehabilitation of Water Network

Further projects to continue the rehabilitation of the watermain system will be carried out within the period of the Development Plan, primarily in the coastal and extra municipal (central) areas of the County. These will include measures to further reduce leakage from the existing distribution system, the ongoing rehabilitation or renewal of structurally deficient mains and the continuing extension of pressure management measures for the optimum management of the system.

C. Sandyford High Level Scheme

Sandyford High Level Scheme - pumping plant, rising main, service reservoirs and distribution mains to improve security of existing water supply and to facilitate development in Sandyford, Ballyogan, Stepside and adjoining areas. This scheme is currently under construction and scheduled for completion in 2010.

D. Sandyford High Level Scheme Distribution Mains

Following completion of the Sandyford High Level Scheme, additional distribution water mains will be laid as required to service development in the Sandyford and Stillorgan Business Park areas.

E. Plumbosolvency (Lead Reduction)

Ensure compliance with revised EU Quality of Drinking Water Regulations in conjunction with other authorities in the Dublin Region.

F. Back Garden Watermains

It is proposed to implement a programme of installation of new water mains and services to the front of houses which are currently dependent on communal water mains in back gardens. The communal systems are frequently subject to high leakage levels and unsatisfactory service.

13.4.2 Drainage Objectives

It is an objective of the Council to undertake the following projects as and when necessary and subject to the availability of appropriate approval and finance:

A. Dún Laoghaire Drainage Scheme

Continuing rehabilitation of any structurally deficient sewers within the Dún Laoghaire Drainage Catchment during the period of the Plan.



Implementing measures to utilise unused capacity within the existing sewerage system. This will involve, where possible, the separation of storm and foul flows and the attenuation of flows. This will be undertaken in order to significantly reduce the risk of flooding and to reduce the volume of storm flows currently pumped to Ringsend for treatment.

Implementing measures to reduce, treat and control storm overflow discharges to watercourses and the sea.

B. Sandymore/Stillorgan Foul Drainage Scheme

Various projects to alleviate predicted flooding in this sub-catchment including pipe upgrades, pipe storage, removal of misconnections etc. Again, it is anticipated that the implementation of this scheme will help reduce overall volumes of discharge currently being pumped to Ringsend for treatment.

C. Carrickmines/Shanganagh Main Drainage Scheme

The continuing extension of the Carrickmines/Shanganagh Main Drainage Scheme along Ballyogan Valley.

D. Carysfort/Maretimo Stream Improvements

Improvement scheme to reduce the risk of flooding. The design of this scheme was completed in 2009 with construction to follow.

E. Deansgrange Stream Improvements

Improvement scheme to reduce the risk of flooding.

F. Shanganagh River Improvements

Improvement scheme to reduce the risk of flooding.

G. Shanganagh Sea Outfall Works

Construction of an upgraded sewage treatment plant to eliminate the discharge of untreated municipal sewage from the Shanganagh and Bray sea outfalls to meet the *EU Urban Waste Water Directive* (1991). This project will include a sewage transfer pipeline from Bray Pumping Station to Shanganagh and will be carried out in conjunction with Bray Town Council/Wicklow County Council. This scheme is at construction stage and is due for completion at end of 2010.

Update the Sludge Management Plan in conjunction with the upgrade to Secondary Treatment at Shanganagh Treatment Works.

H. Shanganagh Catchment Sewerage System

Implement a programme of rehabilitation of structurally deficient sewers.

Implement measures to utilise unused capacity within the existing sewerage system. This will involve, where possible, the separation

of storm and foul flows and the attenuation of flows. This will be undertaken in order to reduce the risk of flooding and to reduce the volume of storm flows transferred to the new Shanganagh Works for treatment.

Implementing measures to reduce, treat and control storm overflow discharges to watercourses and the sea.

13.4.3 Waste Management Objectives

It is an objective of the Council to undertake the following projects as and when necessary and subject to the availability of appropriate approval and finance:

A. Ballyogan Recycling Park

The Council is developing an integrated waste management centre at Ballyogan Recycling Park. This Park will be developed in three stages. Stage 1 involved the construction of a Waste Transfer Facility, a Civic Recycling Facility and associated infrastructure and has been operational since 2004. Stage 2 involves the provision of an Organic Waste Composting Facility, and a Green Waste Composting Facility which are both programmed for completion in 2010. Stage 3 - Materials Recovery/Recycling Facility - will be constructed at a later date, as yet unspecified.

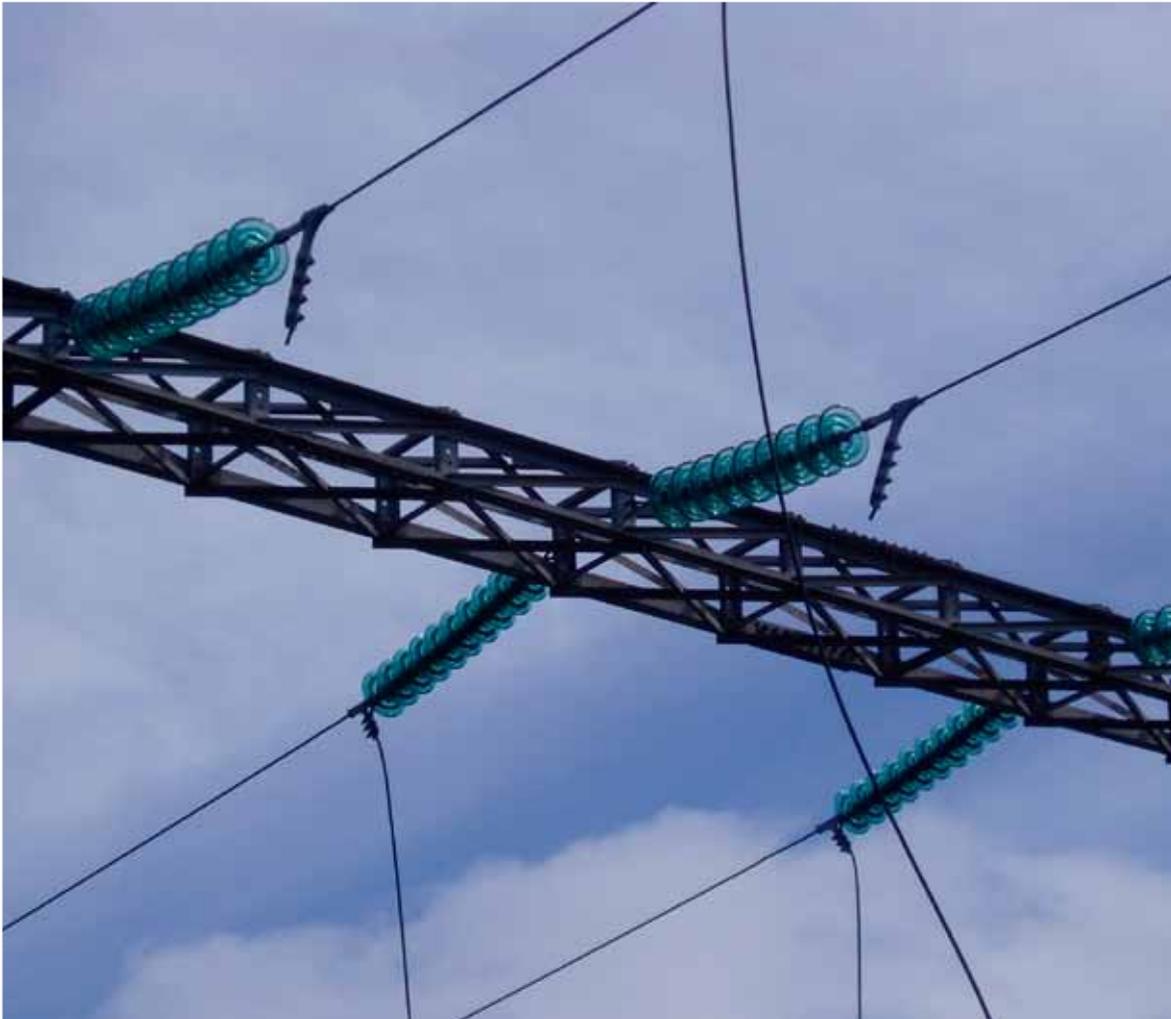
13.5 Statutory Undertakers and Telecommunications

13.5.1 Policy EI21: Energy Facilities

It is Council policy to encourage the provision of energy facilities in association with the appropriate service providers. In addition the Council will facilitate the expansion of the existing service providers, notably Bord Gais and the Electricity Supply Board (ESB), in order to ensure satisfactory levels of supply and to minimise constraints for development.

The provision of a wide range of energy facilities will ensure that the needs of all sectoral interests in the County can be provided for in a sustainable fashion. The Council will be open to the future requirements of the major service providers, such as Bord Gais and the ESB, where it is proposed to enhance or upgrade existing facilities or networks.

It is a general objective, where strategic route corridors have been identified, to support the statutory providers of national grid infrastructure by safeguarding such strategic corridors from encroachment by other developments that might compromise the provision of energy networks.



13.5.2 Policy EI22: Overhead Cables

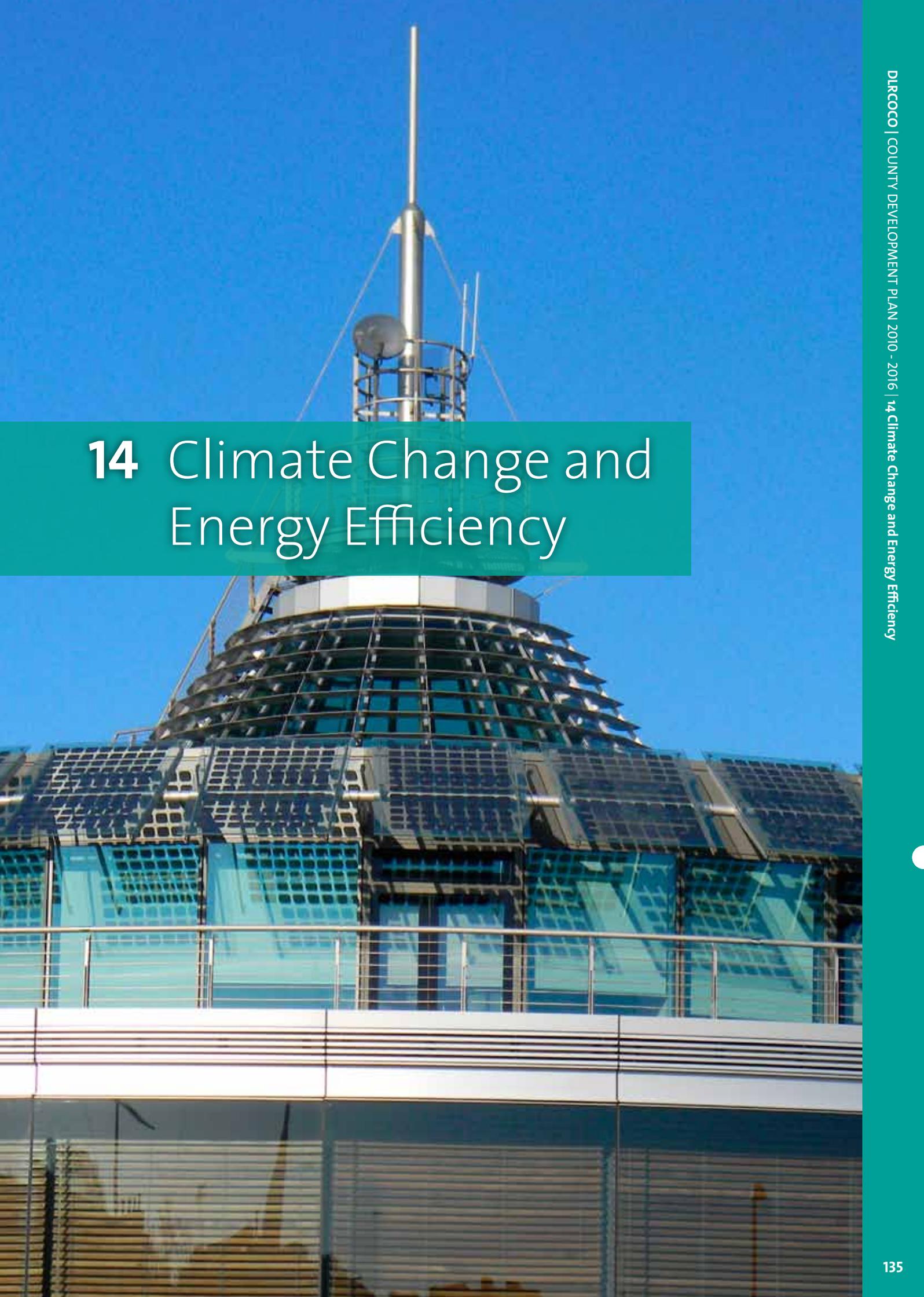
It is Council policy to seek the undergrounding of all electricity, telephone and television cables wherever possible, in the interests of visual amenity and public health.

13.5.3 Policy EI23: Telecommunications Infrastructure

It is Council policy to promote and facilitate the provision of an appropriate telecommunications infrastructure, including broadband connectivity and other technologies, within the County.

The widespread availability of a high quality telecommunications network throughout Dún Laoghaire-Rathdown will be critical to the development of a knowledge economy, will help attract inward investment in hi-tech knowledge based industries and will engender the image of the County as the premier entrepreneurial County in the State.

The advantages of a high quality telecommunications network must however be balanced against the need to safeguard the rural and urban environment, particularly in sensitive areas where the impacts on residential amenity and visual amenity of areas needs to be adequately assessed.



14 Climate Change and Energy Efficiency

14 Climate Change and Energy Efficiency

Vision: To encourage and support energy efficiency, conservation and generation from renewable resources, to facilitate measures which seek to reduce emissions of greenhouse gases and to promote the ethos of sustainability, innovation and energy efficiency in new and refurbished buildings.

14.1 Climate Change

14.1.1 Policy CC1: National Climate Change Strategy

It is Council policy to support the National Climate Change Strategy on an ongoing basis through the implementation of supporting policies in the Development Plan, particularly those promoting use of alternative and renewable energy sources, energy efficiency, sustainable transport and land use planning.

There is now a scientific consensus that climate change is a reality, that it is directly related to man-made greenhouse gas emissions, and that there is little time remaining to stabilise and reduce these emissions if devastating impacts on the planet are to be avoided. There is also an economic consensus that the cost of inaction will greatly outweigh the cost of action, and that progressive climate change policies, based on innovation and investment in low-carbon technology, are consistent with global economic growth.

The Government has produced *'The National Climate Change Strategy 2007-2012'*, which builds on the commitment to sustainable development set out in *'Towards 2016'* and the *'National Development Plan 2007-2013'*. It is one of a number of interrelated Government initiatives that will address energy and climate change issues.

Government Energy Policy now recognises the role that energy saving and renewable energy technologies will need to play in reducing emissions of greenhouse gases and Ireland's dependence upon fossil fuels. If such emissions are to be reduced progressively to meet rising target levels, it is crucial that new buildings meet more stringent energy standards as soon as practically possible.

Dún Laoghaire-Rathdown is committed, as a priority, to encourage more sustainable development, the efficient use of energy and the use of renewable energy in new and refurbished buildings throughout the County.

Dún Laoghaire-Rathdown, in conjunction with the other three Dublin Metropolitan local authorities has established a Climate Change Project Group. With the assistance of specialist consultants the primary objective of the Project Group is to devise practical and realistic strategies that are capable of implementation and will assist in the reduction of the Council's impact on global warming. Under recent Government targets energy usage in the public sector will require a 33% reduction by 2020.

14.1.2 Policy CC2: Renewable Energy

It is Council policy to support national and international initiatives for limiting emissions of greenhouse gases and encourage the development and use of renewable energy sources.

In line with the principles of sustainable development, the Council will encourage the development of appropriate renewable energy sources, which make use of natural resources in an environmentally acceptable manner.

The County Council is leading by example through its commitment to sourcing most of its electricity at all of its non-domestic sites from renewable energy. It is also the first Local Authority in Ireland to support the installation of infrastructural measures in the form of public charging facilities for electric vehicles as a direct response to the targets set by Government.

14.1.3 Policy CC3: Wind & Wave Energy

It is Council policy to support and promote, in conjunction with other relevant agencies, wind energy initiatives – both on-shore and offshore – when these are undertaken in an environmentally acceptable manner.

It is acknowledged that wind and wave energy as renewable energy sources could have an important role to play in achieving national targets in relation to reductions in fossil fuel dependency and, by implication, greenhouse gas emissions. The Government's *'Wind Energy Development Guidelines for Planning Authorities'* (2006) sets out a detailed methodology to help identify optimum locations for the development of commercial wind generating facilities. Having undertaken an analysis of wind speeds and the sensitive landscapes of the County at a broad level, and their relationship to the existing electricity grid network, Dún Laoghaire-Rathdown concluded there is no realistic or practical potential for economic on-shore wind farm development in the County without significant and overriding adverse

visual and environmental impacts. (The analysis leading to this conclusion is set out in Appendix E.)

The Council remains supportive of offshore wind energy initiatives and will cooperate with the Department of Communications, Energy and Natural Resources in any practical fashion in relation to the implementation of additional wind and wave projects in the Irish Sea.

14.1.4 Policy CC4: Small-Scale Wind Energy Schemes

It is Council policy to encourage small-scale wind energy developments within industrial areas, and to support small community-based proposals in urban areas provided they do not negatively impact upon the environmental quality or residential amenity of the area.

Dún Laoghaire-Rathdown will encourage domestic households in appropriate locations to install micro-wind energy units. Central Government support to such small-scale renewable energy projects is implicit in the various planning exemptions provided for under the Planning and Development Regulations 2007.

14.2 Energy Efficiency in Buildings

The creation of sustainable developments recognises the interplay between good urban design, accessibility to sustainable modes of transportation, maximising links to existing social and community infrastructure and the most efficient use of energy and natural resources. During all stages of the design process, regard

should be had to the implications of decisions on energy demand. The ultimate outcome of these decisions dictates the level to which a development will be deemed successful and sustainable.

It is considered that the primary focus with regard to the efficient use of energy and natural resources is to design buildings that create a thermally efficient building envelope. Such buildings will make optimum use of free heat gains in order to minimise the requirement of space heating and, in turn, will retain this heat gain through a high standard of insulation and heat recovery systems. The use of on-site 'micro renewables' or district heating systems will offer significant opportunities. Geothermal heating systems and localised waste-to-energy systems are relatively new technologies still largely in their infancy and requiring further development and research before any general application might be countenanced. A number of pioneering experimental schemes are actively being assessed in Scandinavia.

Into the future it is critical that all new building development employ materials with a low embodied energy, sourced from local sustainable sources and ultimately readily capable of being recycled.

14.2.1 Policy CC5: Energy Efficient Building Design

It is Council policy to promote and support the use of passive measures in the construction of the building fabric of new developments in preference to active measures, to minimise future reliance on fuel sources.



Making the right design decisions in relation to design/construction can contribute greatly to the sustainability of a building, which will lead to cost savings in the future and raise comfort levels for occupants. It is important however that decision priorities are given to passive measures i.e. site orientation, dwelling layout, levels of insulation, detailing and air tightness as these measures minimise a building's reliance on active measures including the use of energy efficient space heating.

Dún Laoghaire-Rathdown will encourage the energy efficient design of buildings and their layout and orientation on site. Developers applying for planning permission for new buildings or buildings undergoing major refurbishment may be required to submit an Energy Statement as part of their planning application addressing how demolition, construction and long term management of the development will be catered for and how overall energy considerations have been addressed in the scheme. (See also Section 5.3.4 regarding demolition and Section 11.3.15 regarding renovation and re-use of locally significant buildings). Special consideration will be given to sustainable development which focuses on carbon neutral footprint building(s) and those who highlight embodied energy savings.

14.2.2 Policy CC6: Sustainability in Adaptable Design

It is Council policy to promote sustainable approaches to the improvement of standards for habitable accommodation, by allowing dwellings to be flexible, accessible and adaptable in their spatial layout and design.

It is important that the design of individual buildings facilitate a good quality of life for residents and secures long-term sustainability of the overall development. The design of new residential developments should consider not just the immediate needs of the prospective occupants but also their possible changing needs over the life of the building.

14.2.3 Policy CC7: Energy Performance in Existing and New Buildings

It is Council policy to promote innovative building design that demonstrates a high level of energy conservation, energy efficiency and use of renewable energy sources – all in accordance with national regulations and policy guidelines.

The Government has committed to a constant review of the Building Regulations (Technical guidance Document L – Conservation of Fuel and Energy), the most recent of which was completed in 2008. The Building Regulations (Part L) are the main influence on standards of energy performance and carbon dioxide emissions for Ireland and in this regard the Council intends to use this statutory

device to improve the overall energy efficiency and renewable energy performance of both new and existing buildings within the County.

Dún Laoghaire-Rathdown is committed as a priority to encourage more sustainable development, the efficient use of energy and the use of renewables in new build and refurbishment projects throughout the County. The current nationally approved energy rating methodology and software should be used to certify new developments.

14.2.4 Policy CC8: Improved Energy Performance

It is Council policy to seek to promote sustainable design and energy consideration standards higher than the National Government policy standards in selected areas of Local Area Plans and the proposed Strategic Development Zone at Cherrywood.

Dún Laoghaire-Rathdown will seek the co-operation of and actively encourage developers on selected new greenfield sites to initiate pilot projects aimed at promoting innovation in relation to energy conservation and efficiencies and the incorporation of renewable technologies. The Council may offer some fiscal support and incentives to particularly innovative, sustainable and energy efficient proposals.

14.2.5 Policy CC9: Radon Gas

It is Council policy, in partnership with other relevant agencies, to promote best practice in the implementation of radon prevention measures.

The Radiological Protection Institute of Ireland (RPII), in a recent survey of over 2,200 houses in the Dublin metropolitan area found that, on average, 6% of dwellings exceed the National Reference Levels of radon gas.

Technical Guidance Document C of the current Building Regulations provides technical information on the importance of radon prevention measures within dwellings and how they should be installed effectively. In an era of increasing sustainability of design and air tightness of construction systems, it is increasingly important that correct measures to deal with radon are fully implemented at the preliminary design stage.

14.3 Flood Risk

One of the effects of climate change that can be anticipated, and a key adaptation issue, is the management of water and the maintenance of quality standards as the global temperature increases and rainfall patterns change. Flood risk needs to be considered at all stages of the land use planning process and managed in an environmentally sensitive way. The Government's recently published 'Flood Risk Management Guidelines', 2009, intends to ensure a more rigorous



and systematic approach to integrating flood risk management in the preparation of Development Plans, Local Area Plans and in the determination of planning applications.

14.3.1 Policy CC10: Flood Risk Management Plans

It is Council policy to assist and co-operate with the Office of Public Works in developing Catchment-based Flood Risk Management Plans. Any recommendations and outputs arising from the Flood Risk Management Plans for Dún Laoghaire-Rathdown will require to be incorporated into the Development Plan.

In partnership with other organisations, the Office of Public Works is developing a series of country-wide Catchment-based Flood Risk Management Plans (FRMPs). These Plans will establish long-term strategies and programmes for managing flood risk within the relevant river catchment. These Plans will identify areas of floodplain importance for conveyance and natural storage and areas where flood risk management measures may need to be implemented.

14.3.2 Policy CC11: Flood Risk Management

It is Council policy to take into account the requirements of the EU Directive (2007/60/EC) on the assessment and management of flood risks, and to implement the recommendations of the Department of the Environment, Heritage and Local Government and the Office of Public Works

Guidelines on 'The Planning System and Flood Risk Management, 2009' including using the Guidelines to assess applications for planning permission.

The Planning Guidelines relating to 'The Planning System and Flood Risk Management', recently issued by the Department of Environment, Heritage and Local Government and the Office of Public Works in 2009 describe good practice in the consideration of flood risk in planning and development management and aims to integrate flood risk management into the overall planning process from strategic consideration to site specifics. (See also Section 16.17).

The core objectives of the Guidelines are to:

- Avoid inappropriate development in areas at risk of flooding.
- Avoid new developments increasing flood risk elsewhere, (including that which may arise from surface run-off).
- Ensure effective management of residual risks for development permitted in floodplains.
- Avoid unnecessary restriction of national, regional or local economic and social growth.
- Improve the understanding of flood risk among relevant stakeholders.
- Ensure that the requirements of EU and national law in relation to the natural environment and nature conservation are complied with at all stages of flood risk management.

The key principles of a risk-based assessment to managing flood hazard and potential risk in the planning system are based on a sequential approach as set out in the Guidelines. The sequential approach involves:

- Avoiding development in areas at risk of flooding.
- If this is not possible, consider substituting a land use that is less vulnerable to flooding.
- Only when both avoidance and substitution cannot take place should consideration be given to mitigation and management of risks.

Possible exceptions to restriction of development due to potential flood risks are provided for through the use of a Justification Test, whereby the overriding planning need and the sustainable management of flood risk to an acceptable level can be demonstrated.

Based on best practise advocated in the Guidelines Dún Laoghaire-Rathdown will promote the following objectives:

- To preserve riparian strips free of development and of adequate width (minimum of 10m) to permit access for river maintenance.
- To integrate comprehensive flood risk assessment and management in the overall planning process to include forward planning and development management.
- To avoid flood risk to people and property, where possible.
- To seek to manage the risks to acceptable levels through the use of flood relief schemes,

and/or flood-resistant and flood-resilient construction methods, where avoidance is not possible.

- To address flood risk management in the detailed design of development, as set out in Appendix B of the Guidelines.

14.3.3 Policy CC12: Coastal Defence

It is Council policy to prepare a Coastal Defence Strategy for the County.

Consultants have been appointed to prepare a Coastal Defence Strategy for Dún Laoghaire-Rathdown. That assessment is well advanced. The overall objectives of the project are to:

- Detail a coastal protection strategy identifying specific coastal protection measures on a priority basis.
- Undertake a risk assessment of the vulnerability of the study frontage and hinterland to both erosion and coastal flooding.
- Identify the extent of areas at risk from both erosion and coastal flooding and risk to be quantified in terms of exceedence probability, having regard to the presence of any existing coastal protection structures and their condition.
- Identify appropriate coastal protection options (including a preferred option) to manage risks identified to persons, property, infrastructure or environment and amenity asset. (See also Section 16.18.1).

